SEQUENT OCCUPANCY OF A VILLAGE ON THE OHIO TILL PLAIN.

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The Ohio till plain is at its agricultural best in the Miami Valley in the southwestern part of the State. It is not only a pleasant countryside, but a vigorous and prosperous one as well. Typical of the many villages which characterize this densely-populated plain is Waynesville on the Little Miami River. Situated almost equidistant from the two largest cities of the lower Great Miami Valley, this village exemplifies the results of a period of industrial selection through which these towns and villages have passed as peripheral to the major urban agglomerations.

Its settlement dates from the most important event of the Miami Country, the treaty with the Indians at Greenville in 1795. During the century and a quarter of its existence, this village of 700 population has experienced a succession of regional economies which it is the purpose of this paper to examine, to the end that some of the qualities of geographic relationship may be determined.

The location of early Waynesville was on a canal or raceway dug on the west side of the river at a point where a meander could be closed by digging somewhat less than two miles. The configuration of the immediate site was at first determined by the extent of the well-drained river terrace or second bottom, the village constituting an attenuated agglomeration of pioneer dwellings grouped about the two grist and two saw mills which utilized the power of the raceway.

Immediately opposite there is a break in the border of glacial drift which gives the only easy access for several miles to the eastern upland stretching away toward the Scioto basin. The village, then, was situated at the crossing of a principal east-west highway and the main north-south road of the Little Miami Valley.

PIONEER STAGE IN THE SEQUENCE.

The economy of Waynesville during the first decades of the nineteenth century approached regional self-sufficiency. Over

all of this section of Ohio there was a magnificent stand of hardwood, the clearing of which was at once the initial step in the agricultural occupation of the area, and an industry as

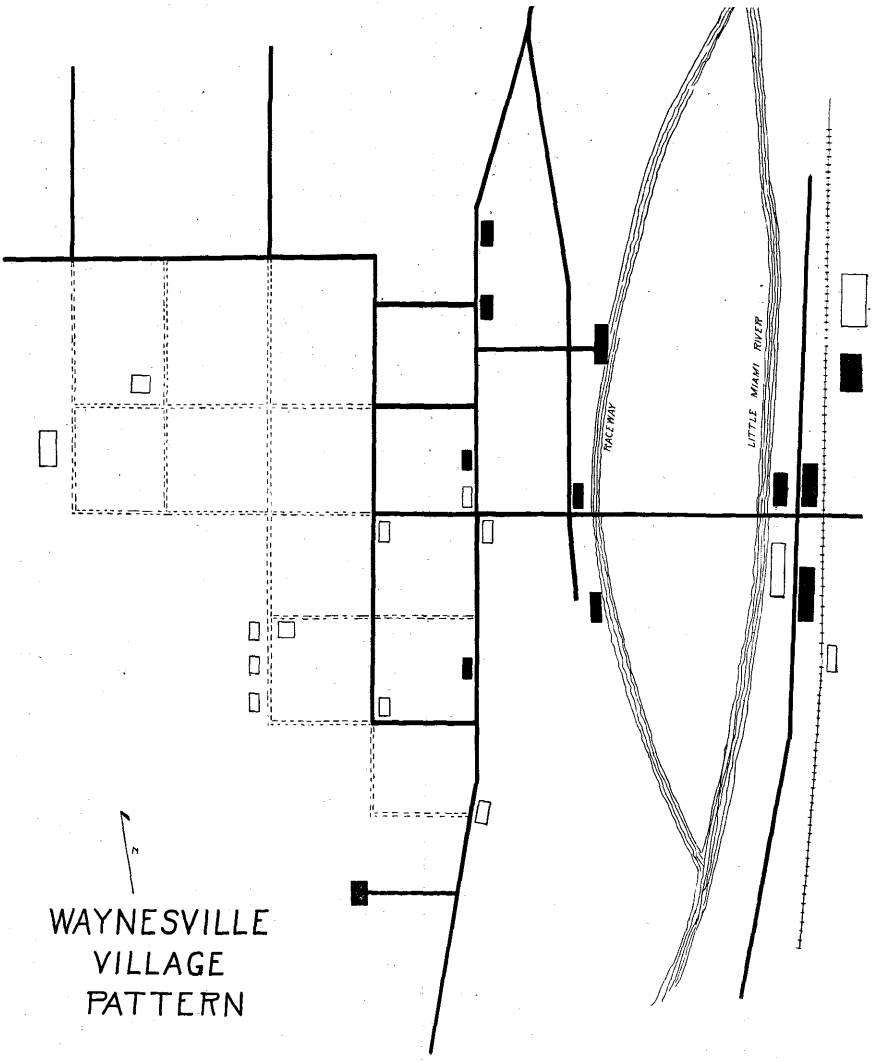

FIG. 1.

well. Corn and wheat were the principal crops; the great corn lands of the lower Miami Country gave rise to an important livestock industry before the upper portion of the Valley was settled. Steers and swine were driven to Baltimore

in increasing numbers until 1853, when Cincinnati began the packing of pork in an important way. The ubiquitous distillery accounted for a fair portion of the local corn crop; Waynesville had two large distilleries, and many of the adjacent farms distilled whiskey for local consumption. Wheat was milled by two establishments in the village; this region with others of the Miami Country produced most of Ohio's flour for several generations. In a word then, the essential characteristic of Waynesville during this pioneer period was the processing of ubiquitous raw materials for the satisfaction of the local market.

MIDDLE PERIOD.

The middle of the century witnessed the expansion of the village away from the river. (Fig. 1). Changing values assignable to environmental factors were faithfully reflected in the changed configuration of the village in its site, as well as the extent and variety of its manufacturing.

With the construction of highways and the use of steam power, the expansion of the village was onto the upland. Its main street became a part of the principal artery between Cleveland and Cincinnati; its major cross street was the southern-most highway between the Miami Valley and the Virginia Military Lands. The first railroad in Ohio, now the Pennsylvania Lines, followed the Little Miami River valley northward to Columbus and Lake Erie. Where this railroad crossed the east-west highway was formed the nucleus for Waynesville Station, embracing the depot, stock loading pens, grain elevator, saw mill and lumber yard, canning plant and the warehouses for wool and tobacco,—an agglomeration functioning integrally with the village but removed from it by the flood plain of the river. This period was characterized by the rapid growth of the village and the changed economic horizons resulting from the railroad and improved highway transportation. Manifestations of this period's growth are visible on every hand; new mills, new homes and the service of the principal utilities.

MATURING OF THE REGION.

The third stage of occupancy is characterized by the economic results of accessibility to other parts of the Miami Valley. This is reflected in the closing of the mills, cessation of local service by the railroad, and finally the crystallization of the economic

life of the Waynesville region into its present stage of commutation.

Whereas prior to the advent of the railroad, all of the Miami Valley was more or less tributary to Cincinnati and the Ohio River, steam transportation served to open up new economic horizons for these cities. Of greater interest to them than the southern market was the new market of the interior plains. They looked to the east, north and west made accessible by steel rails. The rapid growth of Dayton, Springfield, Hamilton and Middletown was ushered in by rail transportation. A new system of highways came into being, made necessary by the changed and vastly increased commerce within the Corn Belt. The greatest effect, naturally, would be noted not in the immediate marketing of farm products, but rather in the regional commerce adapting itself to the new and rapidly-growing manufacturing cities of the Great Miami Valley. When the automobile had demonstrated its superiority in handling certain types of traffic and the railroads had accordingly altered their service program, Waynesville found itself without the rail service to which it had become accustomed and upon which an element of its economy was dependent. Whereas 60% of the farm income of Warren County (Waynesville) is from livestock, divided almost equally between swine and cattle, the stock-loading pens are no longer used.* Although a constant part of the farm income is from tobacco, 19%, the warehouse is not used. Wheat still constitutes some 12% of farm income, but the two flour mills are closed and the elevator handles only a part of the local crop. Receipts from dairy cattle are greater, yet the milk car is no longer a daily feature of the morning train. Only one train each way stops at Waynesville, yet the number of trains passing through is as great as ever. The agent's time is now divided between two depots within commuting distance. Only the coal yard, corn canning plant, lumber yard which distributes but does not manufacture, and the elevator remain in operation at Waynesville Station.

In the village itself the creamery is closed; trucks swiftly gather up the separated cream for the larger creameries of Dayton and Cincinnati. The two flour mills have closed; farmers raise somewhat less wheat and truck their harvest to

*Data from individual Farm Schedules, Bureau of the Census, Department of Commerce, Washington.

one of the larger elevators in the Valley. The electric light and pumping station is now a unit in a great utilities concern which supplies two score of towns in the Valley. Two of the three slaughter houses are closed; dealers truck their supply from Dayton and Cincinnati. Wool and tobacco are bought up by buyers from distant warehouses. Of the four agricultural implement dealers, one remains with a stock scarcely reminiscent of former days.

COMMUTATION.

With these possibilities for employment closed, the number of wage-earners commuting to Dayton, Middletown and Hamilton has steadily increased. The twenty-mile drive contacts the villagers with several types of employment, outstanding among them being the General Motors and National Cash Register plants at Dayton; the Niles Tool Works at Hamilton; the American Rolling Mill plants at Middletown and Hamilton; the rag paper mills scattered from Hamilton to Dayton; and the tobacco factories of Middletown and Dayton. There is represented here a wide variety of wage job, with the manufacture of precision machinery predominating. An examination of commutation reveals a very definite type of wage earner engaging in it, a type of worker which the great tool plants and manufacturers of automatic and calculating machinery hold at a premium. There is then the coincidence of this demand being satisfied by the workers from a valley in which the small proportion of foreign-born are superior types from northwest Europe, and the native is readily absorbed in the precision ranks of skilled workers.

As have many other towns in the Valley, Waynesville has a diminishing proportion of retired farmers among its citizenry, yet its population is slowly but steadily increasing. Commutation plays an increasingly important part in the support of the Miami Valley. The Census of 1930 shows that during the decade immediately preceding these Valley counties grew more rapidly in population than the State as a whole: 17% as against 15%. Not all of the Valley counties gained however; five of the twelve declined in population. Warren county (Waynesville) gained more rapidly than any other county except Montgomery (Dayton). A more definite conception of the nature of this increase on the part of Warren county may be gained in noting the increase in the number of

families over a like period; in this particular Warren county gained more than any other county in the Valley.

Field study confirms the impression gained from these figures that through commutation Waynesville and other towns are crystallizing their economic life into a mature stage of economic regionalism in which abandoned local industrial features stand as mute evidence of former areal limitations imposed upon them. The sequent occupancy of this village is complete with the stage which witnesses its integration with the economic life of larger centers whose major activities are attuned to the remote as well as the immediate environment.

WHERE IS COLUMBUS?*

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Those acquainted with Columbus will doubtless be interested in knowing that the exact geographical location of Broad and High has been determined from a station on top of the building at 8 East Broad Street as

Latitude—39° 57′ 44.984″ N.
Longitude—83° 00′ 1.605″ W.

It will be seen from these figures that the center of Columbus is less than 3 minutes from the 40th parallel of latitude and almost upon the 83rd meridian of longitude. In fact the 83rd meridian approximately parallels Summit Street, crossing High Street at the State House. The 40th parallel crosses Ohio State University campus in front of University Hall.

These calculations have as their center a station at Meades Ranch, Kansas, the location of which was determined by astronomical methods to be 39° 13′ 26.686″ latitude (almost the same as Columbus) but 98° 32′ 30.506″ longitude. From this point, triangulation lines have been extended in all directions, furnishing exact points from which other precise lines can be surveyed. Our Ohio line extends from Sandusky on Lake Erie to Portsmouth on the Ohio River, taking in Fremont, Columbus, and Chillicothe on the way.

This romance of lines is the work of the U. S. Coast and Geodetic Survey. Our country has become a network of lines, which, upon closer examination, are found not to be mere lines but a series of superimposed triangles, each angle the center of marvelous activity for measuring the extent of our continent.

In connection with this work, stations have been established which are available controlling precise local surveys. Two such triangulation stations are located in Columbus, one at the State Hospital on West Broad Street and the other on the old Ohio Brewery Building on South High Street. These two stations were established about 1927. When in 1928–29 the U. S. Coast and Geodetic Survey was working on the triangulation net for the entire eastern half of the country, it adjusted its system to include the Columbus stations.

Detailed information on these adjusted geographic locations is being published by the U. S. Coast and Geodetic Survey and can be obtained in the near future.

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*From Engineering Experiment Station News.